



**NHDES Waste Management Division
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095**

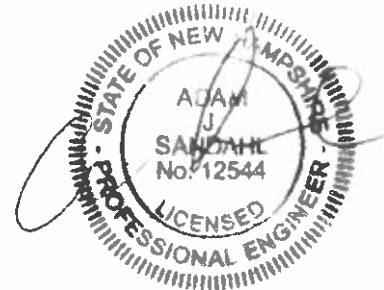
**Type II Modification to Solid Waste Management
Facility Permit**

**February 2023 Operating Plan Update
North Country Environmental Services Landfill
581 Trudeau Road
Bethlehem, NH 03574**

**NHDES Site #: 123456789
Project Type: SW-LNDFILL
Project Number: 021939**

Prepared For:

**North Country Environmental Services, Inc.
1855 VT Route 100
Hyde Park, VT 05655
Phone Number (802) 651-5454
RP Contact Name: John Gay
RP Contact Email: john.gay@casella.com**



Prepared By:

**CMA Engineers, Inc.
35 Bow Street
Portsmouth, New Hampshire 03801-3819
P: 603|431|6196
Adam Sandahl, P.E.
asandahl@cmaengineers.com**

Date of Report: January 30, 2023



January 30, 2023

Ms. Jaime M. Colby, P.E.
Solid Waste Management Bureau, Waste Management Division
New Hampshire Department of Environmental Services
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

**RE: North Country Environmental Services, Trudeau Rd, Bethlehem, NH
Type II Modification to Solid Waste Management Facility Permit
Solid Waste Landfill Facility
Permit No. DES-SW-SP-03-002
February 2023 Operating Plan Update
CMA #665**

Dear Ms. Colby:

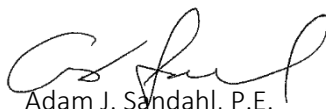
On behalf of North Country Environmental Services (NCES), CMA Engineers, Inc. is submitting this Type II Modification to Solid Waste Management Facility Permit to update the Operating Plan for the facility. Updates to the text are presented in tracked changes. The purpose of this update is to:

- Add a new section: Section 6.9 – Emergency Leachate Removal, which addresses the need to haul leachate outside of the normal operating hours (6 a.m. to 6 p.m.) under emergency or extenuating circumstances.
 - Section 3.1 – Hours of Operation has also been updated to reference Section 6.9
- The Leachate Disposal Facility list in Section 4.1.3 – Pumping/Removal Schedule has been amended to remove the Vermont facilities.

Other sections and appendices remain unchanged from the Operating Plan update that was approved on January 23, 2023. Appendices are not included in this submittal.

Please do not hesitate to contact us at 603-431-6196 if you have any comments or questions regarding this application.

Very truly yours,
CMA ENGINEERS, INC.



Adam J. Sandahl, P.E.
Project Manager



Robert J. Grillo, P.E.
Vice President

AJS/RJG:kao

Appendices:

Type II Modification to Solid Waste Management Facility Permit Application Form
February 2023 Operating Plan Update

cc: John Gay, Engineering Manager, North Country Environmental Services (email only)
Kevin Roy, Site Manager, North Country Environmental Services (email only)
Bryan Gould, Esq., Cleveland, Waters & Bass (email only)
Heather Little, Sanborn Head and Associates (email only)
Ryan Clay, Sanborn Head and Associates (email only)
NHDES Onestop Upload

INSTRUCTIONS
for obtaining a

Type II Modification To Solid Waste Management Facility Permit

pursuant to
RSA 149-M and New Hampshire Administrative Solid Waste Rule Env-Sw 315

Read these instructions before completing the attached form. For additional assistance contact the NH Department of Environmental Services (DES), Permitting & Design Review Section (P&DRS) at (603) 271-2925 or the below noted mailing address or TDD Access: Relay NH 1-800-735-2964.

Note: All references on this form beginning with "Env-Sw" are citations from the New Hampshire Solid Waste Rules. To obtain a copy of the *Rules*, contact the DES Public Information & Permitting Office at (603) 271-2975 or above noted TDD Access. The Rules are also available on the Internet at <http://www.des.nh.gov>.

Use the attached form to obtain a "type II" permit modification. A "type II" permit modification is the regulatory mechanism by which final plans (for construction, operation, closure or financial assurance) are approved and attached to a solid waste facility permit as a condition of the permit.

All requested information must be provided as indicated on the attached form. Do **NOT** skip any question, unless instructed to do so. Do **NOT** mark any question "not applicable." If you need more space than provided on the form to answer a particular question and are using a paper copy of the form, attach additional pages as necessary, mark each page clearly to show both the applicant name and the question being answered, and indicate on the form that the additional pages are attached.

Submit **THREE** copies of the completed form, **EACH bearing ORIGINAL signatures**. Applications may be submitted to the department electronically. If an applicant chooses to submit an application electronically, a single paper copy of the application shall also be submitted to the department to the following address:

NH Department of Environmental Services (DES)
Waste Management Division (WMD)
Permitting & Design Review Section (P&DRS)
29 Hazen Drive, PO Box 95
Concord, NH 03302-0095

Include the required fee (see table below). Make checks or money orders payable to "TREASURER, State of New Hampshire."

Final Design/Construction Plans for a Non-Landfill Facility	NO FEE
Final Design/Construction Plans for a Landfill	Initial Phase: NO FEE Subsequent Phases: FEE is calculated based on capacity & life expectancy of phase; refer to Env-Sw 310.08(a) for formula or contact P&DRS for assistance
Final Operating Plans	NO FEE
Final Closure/Capping Plans for a Non-Landfill Facility or an Unlined Landfill	NO FEE
Final Closure/Capping Plans for a Lined Landfill	FEE is calculated based on capping area; refer to Env-Sw 310.08(b) for formula or contact P&DRS for assistance
Final Financial Assurance Plans	NO FEE

Your application will be processed by DES in accordance with Env-Sw 304 and Env-Sw 305.



Waste Management Division

For Office Use Only:	
WMD Log #:	_____
Date Rec'd.:	_____
No. of Copies: _____	<input type="checkbox"/> Fee: \$ _____
Check # _____	
<input type="checkbox"/> No Fee Required	

APPLICATION FORM FOR

Type II Modification To Solid Waste Management Facility Permit

pursuant to
RSA 149-M and New Hampshire Administrative Solid Waste Rules Env-Sw 315

SECTION I. FACILITY IDENTIFICATION

(1)	Facility name: North Country Environmental Services, Inc.
(2)	Functional Classification: <input type="checkbox"/> Collection/Storage/Transfer <input type="checkbox"/> Processing/Treatment <input checked="" type="checkbox"/> Landfill
(3)	Mailing address: 581 Trudeau Road, Bethlehem, NH 03574
(4)	Permit number: DES-SW-SP-03-002
(5)	Location, by street address and municipality: 581 Trudeau Road, Bethlehem, NH 03574

SECTION II. PERMITTEE IDENTIFICATION

(1)	Permittee/applicant name: North Country Environmental Services, Inc.		
(2)	Mailing address: 1855 VT Route 100, Hyde Park, VT 05655		
(3)	Telephone number: (802) 651-5454		
(4)	If different than above, identify the individual associated with and designated by the permittee/applicant to be the contact individual for matters concerning this application:		
	(a) Name: John Gay	(b)	Title: Region Engineer
	(c) Mailing address: 1855 VT Route 100, Hyde Park, VT 05655		
	(d) Telephone number: (802) 651-5454	(e)	E-mail: john.gay@casella.com

SECTION III. DESCRIPTION OF PROPOSED MODIFICATION

Provide a complete description of the proposed modification by answering each of the following questions. Use additional paper as necessary.

(1)	Identify the type of final plans being submitted for approval. (Check <u>one</u> that applies. If more than one applies, submit a separate application for each):			
	<input type="checkbox"/>	Final design/construction plans for non-landfill facility	<input type="checkbox"/>	Final closure plan for non-landfill facility
	<input type="checkbox"/>	Final design/construction plans for landfill:	<input type="checkbox"/>	Final closure/capping plans for lined landfill
	<input type="checkbox"/>	Initial Phase	<input type="checkbox"/>	Subsequent Phase
	<input checked="" type="checkbox"/>	Final operating plan	<input type="checkbox"/>	Final financial assurance plan
(2)	Provide a BRIEF description of the proposed modification/requested approval: Update to the Facility Operating Plan to include provisions for emergency leachate hauling and removal of Vermont-based wastewater treatment facilities for leachate disposal..			
(3)	Identify, below, the preliminary plans approved in the permit which provide the basis for the final plans being submitted with this application:			
	Check one	TYPE OF PRELIMINARY PLAN	DES Approval Date	WMD Log #
	<input type="checkbox"/>	Facility design plans/specifications		
	<input checked="" type="checkbox"/>	Facility operating plan	January 23, 2023	2022-59385
	<input type="checkbox"/>	Facility closure plan		
	<input type="checkbox"/>	Facility financial assurance plan		
	<input type="checkbox"/>	Other plan (<i>specify</i>):		

(4)	Submit the proposed final plans for which approval is being sought. The plans must be prepared based on the preliminary plans identified in (3) above and according to the below listed instructions. When appropriate, final plans may be presented in the form of replacement pages ready for substitution into the related approved preliminary plans, with each page being clearly marked to show the date of revision. Mark the submitted/attached plans as "Attachment III(4)".
<input type="checkbox"/>	Facility design/construction plans must be prepared in accordance with Env-Sw 1103.05
<input checked="" type="checkbox"/>	Facility operating plans must be prepared in accordance with Env-Sw 1105.11
<input type="checkbox"/>	Facility closure plans must be prepared in accordance with Env-Sw 1106.04
<input type="checkbox"/>	Financial assurance plans must be prepared as specified in Env-Sw 1400 and must include all related financial assurance documents required to effect the plan

SECTION IV. CERTIFICATION OF COMPLIANCE/COMPLIANCE REPORT

If you are able to certify that each of the following statements is true, do so by your signature. If you are unable to certify that each of the following statements is true, you must prepare and submit a separate Compliance Report as specified by Env-Sw 303.15.

COMPLIANCE STATEMENT

The applicant shall certify that each of the statements listed in (1)-(8) below are true for each of the following individuals and entities:

- The applicant, and
- The facility owner, and
- The facility operator, and
- All individuals and entities holding 10% or more of the applicant's debt or equity, and
- All of the applicant's officers, directors, and partners, and
- All individuals and entities having managerial, supervisory or substantial decision making authority and responsibility for the management of facility operations or the activity(s) for which approval is being sought

(1)	No individual or entity listed above has been convicted of or plead guilty or no contest to a felony in any state or federal court during the 5 years before the date of the application.
(2)	No individual or entity listed above has been convicted of or plead guilty or no contest to a misdemeanor for a violation of environmental statutes or rules in any state or federal court during the 5 years before the date of the application.
(3)	No individual or entity listed above has owned or operated any hazardous or solid waste facility which has been the subject of an administrative or judicial enforcement action for a violation of environmental statutes or rules during the 5 years before the date of the application.
(4)	No individual or entity listed above has been the subject of any administrative or judicial enforcement action for a violation of environmental statutes and rules during the 5 years before the date of the application.
(5)	All hazardous and solid waste facilities owned or operated in New Hampshire by any individual or entity listed above are in compliance with either.
	(a) All applicable environmental statutes, rules, and DES permit requirements; or
	(b) A DES approved schedule for achieving compliance therewith.
(6)	All individuals and entities listed above are in compliance with all civil and criminal penalty provisions of any outstanding consent agreement, settlement, or court order to which DES is a party.
(7)	All individuals and entities listed above have paid, or are in compliance with the payment schedule for any administrative fine assessed by DES.
(8)	All individuals and entities listed above are in compliance with all terms and conditions under every administrative order, court order or settlement agreement relating to programs implemented by DES.

Signature of the permittee/applicant certifying the above statements are true:

Permittee/Applicant Name (Print Clearly or Type) See attached Compliance Report

Permittee/Applicant Signature _____

Date _____

OR


Circle the untrue statement(s) and attach a Compliance Report, pursuant to Env-Sw 303.15

SECTION V. PERMITTEE/ APPLICANT SIGNATURE REQUIREMENTS

The permittee/applicant must sign the following statement prior to submitting this application. All copies of the application filed with DES must bear the permittee's/applicant's ORIGINAL signature. If the permittee/applicant is not an individual, an individual duly authorized by the permittee/applicant shall sign the application.

To the best of my knowledge and belief, the information and material submitted herewith is correct and complete. I understand that any approval granted by DES based on false and/or incomplete information shall be subject to revocation or suspension, and that administrative, civil or criminal penalties may also apply. I certify that this application is submitted on a complete and accurate form, as provided by DES, without alteration of the text.

Permittee/Applicant Name (Print Clearly or Type) North Country Environmental Services, Inc.

Permittee/Applicant Signature 

Date 1/27/23

SECTION VI. PROPERTY OWNER SIGNATURE

If the permittee/applicant and property owner are not the same, the property owner must also sign this form as follows. All copies of the application filed with DES must bear an ORIGINAL signature. If the property owner is not an individual, an individual duly authorized by the property owner shall sign the application.

- (1) I hereby affirm that the permittee/applicant has the legal right to occupy and use the property on which the subject facility is or will be located for the purposes specified in this application.
- (2) I hereby affirm that I shall grant access to the property for closure and post-closure monitoring of the subject facility and site as required by RSA 149-M and the New Hampshire Solid Waste Rules, as amended.

Property Owner Name (Print Clearly or Type) _____

Property Owner Signature _____

Date _____

APPLICATIONS OF NORTH COUNTRY ENVIRONMENTAL SERVICES, INC.
FOR TYPE I-B AND TYPE II MODIFICATIONS TO
STANDARD PERMIT NO. DES-SW-SP-03-002 (STAGE VI)

COMPLIANCE REPORT

North Country Environmental Services, Inc. ("NCES") submits the following compliance report in accordance with Env-Sw 303.15(a).

Env-Sw 303.15(b) requires that a compliance report address the following subjects:

- (1) **A complete explanation of the circumstances which cause any statement in Env-Sw 303.14(b)(1) through (b)(8) to be untrue;**

The New Hampshire Department of Environmental Services ("NHDES") issued Administrative Order No. 21-010 WMD, dated July 16, 2021 (the "Order") to NCES based on alleged placement of waste outside of the permitted limits, in violation of the Solid Waste Rules and Facility Permit No. DES-SW-SP-03-002, at the NCES Landfill at 581 Trudeau Road in Bethlehem, New Hampshire. NCES subsequently appealed the Order to the Waste Management Council. The parties have since entered into a Settlement Agreement dated November 23, 2021, whereby NCES has withdrawn its appeal, and NHDES has rescinded the Administrative Order without prejudice or limitation with respect to any future remedy or relief, as NHDES continues to evaluate the placement of waste outside of permitted limits.

- (2) **For each circumstance which causes a statement in Env-Sw 303.14(b)(1) through (b)(8) to be untrue, an explanation as to why the department should not find it to be grounds for denying the requested approval pursuant to the provisions of RSA 149-M:9, IX or X; and**

None of the grounds for denial of an application under RSA 149-M:9, IX and X is implicated here.

- (3) **For each circumstance which causes a statement in Env-Sw 303.14(b)(5) through (b)(8) to be untrue, a plan and schedule by which the applicant proposes to achieve full compliance.**

The Order has been rescinded by NHDES; accordingly, no compliance requirements currently exist.

FACILITY OPERATING PLAN



North Country Environmental Services, Inc.

581 Trudeau Road

Bethlehem, New Hampshire

~~January 2023~~ February 2023

Prepared by:

North Country Environmental Services, Inc.

1855 Vermont Route 100

Hyde Park, VT 05655

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- Appendix A: Rules and Regulations for Facility Use, Certificates of Acceptable Waste Form & Random Load Inspection Form
- Appendix B: Facility Inspection Checklist
- Appendix C: Operations and Maintenance Manual, Gas Management System
- Appendix D: Odor Complaint Form
- Appendix E: Leachate Breakout Repair Logs and Field Sketch
- Appendix F: Operating Procedures for Segregating and On-Site Stockpiling and Processing of Construction and Demolition Debris (C & D)
- Appendix G: Asbestos Disposal Location Plan
- Appendix H: Traffic Pattern & Sequencing Plans

FACILITY OPERATING PLAN

This Facility Operating Plan (Plan) is for the North Country Environmental Services, Inc. (NCES) landfill facility located on Trudeau Road in Bethlehem, New Hampshire. The purpose of this Plan is to describe the operating requirements for the facility in accordance with the New Hampshire Solid Waste Rules. A copy of this Plan is to be maintained at the facility.

1.0 FACILITY IDENTIFICATION

The facility is owned and operated by NCES. The current mailing address and telephone number for the facility are:

North Country Environmental Services, Inc.
581 Trudeau Road, PO Box 9
Bethlehem, NH 03574
Telephone (603) 869-3366
Facsimile (603) 869-2152

The facility is a lined landfill comprised of five Stages. Stages I, II, III, IV & V were permitted by the New Hampshire Department of Environmental Services (NHDES) in 1987, 1989, 2000, 2003, & 2015 (Permit Nos. DES-SW-87-022, DES-SW-89-009, DES-SW-SP-00-003, and DES-SW- SP-03-002), respectively. The approved design capacity for Stages I – V is: 8,535,000 cubic yards. The Stage VI design capacity is 1,241,000 cubic yards. The facility is anticipated to receive 3,350 tons of waste on average per week.

The facility is a commercial disposal facility and has no restricted service area.

1.1 Facility History

The site has been an active solid waste facility since 1976 when a town resident began landfilling in his unlined soil borrow pit. The site was later acquired and operated by Sanco, Inc. Sanco received a permit for the first double-lined landfill in New Hampshire in 1987. In 1989 Sanco sold the facility to Consumat Sanco, Inc. The waste from the unlined landfill was excavated and replaced in the lined landfill. In the early 1990s a subsidiary of Casella Waste Systems, Inc. entered into an agreement to purchase the stock of Consumat Sanco and began participating in the operation and management of the facility. After

Casella's subsidiary closed on the purchase of the stock of Consumat Sanco it changed the name of the corporation to North Country Environmental Services, Inc.

2.0 AUTHORIZED AND PROHIBITED WASTES

2.1 Authorized Wastes

Wastes which may be accepted at the facility include:

- Municipal solid waste (MSW) as defined in State of New Hampshire Solid Waste rules.
- Construction and Demolition (C&D) waste which includes non-putrescible building and site material waste and rubble. Examples of such waste include, and are not limited to, bricks, concrete, and other masonry materials, wood, wall coverings, plaster, dry wall, plumbing, fixtures, non-asbestos insulation or roofing shingles, asphaltic pavement, glass, plastics, electrical wiring and components containing no hazardous liquids and/or metals that are incidental to any of the above.
- Non-liquid, non-hazardous Special Waste, as defined in Section 3.3.2, which has received prior approval of NCES, in accordance with Section 3.3.2.1. Special Waste may include but is not limited to the following:
 - Waste from industrial processes;
 - Waste from pollution control processes including but not limited to water and wastewater treatment sludges and air pollution control residues;
 - Residue from a spill of a chemical substance or commercial chemical product or a waste listed above;
 - Commercial products which are off-specification, outdated, or unused;
 - Waste produced during the demolition or dismantling of

industrial process equipment;

- Waste produced during the demolition or dismantling of automobiles (auto fluff);
 - Ash managed in accordance with the requirements of Env-Sw 902;
 - Contaminated soils and media managed in accordance with Env-Sw 903;
 - Contaminated residuals from the clean-up of a facility generating, storing, treating, recycling, or disposing wastes, chemical substances or commercial products listed above;
 - Treated infectious waste which has been autoclaved, or otherwise treated and disinfected in accordance with the requirements of Env-Sw 904; and
 - Other non-hazardous solid waste that requires special handling prior to disposal or acceptance in accordance with Section 3.3.2.
- NHDES Certified Waste Derived Products as follows;
 - CWDP #21 – MSW Incinerator Ash from Wheelabrator (N. Andover)
 - CWDP #14 - Auto Shredder Alternative Daily Cover (ADC)
 - CWDP #13 – Biosolids Incinerator Ash ADC
 - CWDP #10 Bottom Ash from Wood Fired Boilers ADC
 - CWDP #6 - C&D & Soil Mixture ADC
 - Any other Certified Waste Derived Products approved by NHDES

NHDES Certified Waste Derived Product requirements for the CWDPs listed above are provided on the NHDES

website at this URL:

http://des.nh.gov/organization/divisions/waste/swmb/pdrs/waste_derived.htm

- Other ADC
 - Airspace Saver Synthetic Tarps (Type III Permit Modification 9/9/02)
 - Processing C&D to Produce a Waste Derived Product as ADC (Type I-B Permit Modification 12/27/01)
 - Geosynthetic Tarps (Type III Permit Modification 2/12/98)
 - Casting Sands (Type III Permit Modification 2/12/98)
 - Contaminated Soils Meeting Env-Sw 806.03(b) & Env-Sw 903.05(b)(2)
 - ERRCO-Epping C&D Processing Residuals (Type III Permit Modification 2/12/98)

2.2 Prohibited Wastes

Wastes which are prohibited from disposal at the facility and shall not be knowingly accepted by NCES, include the following:

- Wastes prohibited by state and federal law;
- Hazardous wastes (as defined by the federal and New Hampshire Hazardous Waste Rules);
- Infectious waste;
- Asbestos waste including solid waste containing more than 1 percent asbestos by weight;
- Liquid wastes (that is waste containing free liquids as defined by Method 9095 Paint Filter Liquids Test as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" [USEPA Pub. No. SW-846]);
- Contained gaseous wastes;
- White goods;
- Leaf and yard waste;
- Whole tires;
- Special wastes not approved by NCES;
- Mercury added products;
- Video Display Devices;
- Wet cell/M-Cad/Rechargeable Batteries;

- Radioactive materials as defined by He-P 4000; and
- Sludges that are not treated for odors prior to receipt at the facility.

Customers are required to execute a Certificate of Acceptable Waste form (Appendix A).

Incoming waste is to be monitored in accordance with the procedures outlined in Section 3.3. Those materials which are specified as unacceptable for disposal are to be rejected as described in Section 6.6.

3.0 ROUTINE OPERATIONS PLAN

3.1 Hours of Operation

Hours the facility accepts waste (gate hours) are 6:00 a.m. to 6:00 p.m. Monday through Friday, and Saturday 7:00 a.m. to 12:00 p.m. Gate hours can be adjusted as necessary to meet actual disposal requirements of facility users, yet must occur between the hours of 6:00 a.m. and 6:00 p.m. Leachate removal may occur outside of these hours under the emergency conditions described in Section 6.9.

The facility may be closed on Sundays and the following holidays: New Year's Day, Thanksgiving Day and Christmas Day. Additionally, the facility may be closed on Memorial Day, Independence Day and Labor Day.

All routine landfill operations and inspections, maintenance, repairs, and monitoring under non-emergency circumstances is to be conducted between the hours of 6:00 a.m. and 6:00 p.m. unless otherwise approved by NHDES.

Leachate is generally removed from the facility during routine operating hours; however, from time to time (i.e., such as during the spring snow melt season, significant rain accumulation, periods before or after which roads are not passable, early operations of a new cell, and holidays) it may be necessary to remove leachate from the facility during-outside

the hours ~~from~~of 6:00 a.m. to 6:00 p.m. If leachate removal is required outside of this time frame for emergency or other extenuating circumstances, NCES will notify NHDES-WMD.

3.2 Access Control and On-Site Traffic Patterns

Access to the facility is restricted by an electronically operated locking gate located on the access road to the scale house from Trudeau Road. Other access points to the facility are at the end of Muchmore Road and the old State Forest Road, each are not open to the general public. Muchmore Road and the old State Forest Road have locked access gates along with natural barriers. The southern-most access point (former Tucker property) has a locked gate in addition to natural barrier. Otherwise natural barrier prevents unauthorized facility access.

Signs are to be posted and maintained at the entrance road, gate and scale house indicating:

1. The facility name and permit number;
2. The name, address, and telephone number of the Permittee;
3. The hours of operation;
4. The types of wastes accepted; and
5. A statement that unlawful dumping shall be subject to fine and prosecution.

The scale house is occupied by NCES personnel during daily operating hours and has a 24-hour video surveillance system. The scale house operator is also responsible for monitoring traffic flow at the entrance of the facility. The gate is to be locked after everyone has left the facility.

The scale house is located near the entrance. Incoming vehicles stop at the scale and are weighed, then proceed to the landfill tipping area. The scale operator and equipment operators on the working face use a CB and/or a two-way radio to communicate. When appropriate, the scale operator will inform the operators at the working face that a truck has been cleared to proceed to the tipping area and provide any

specifics on the load or special handling criteria. Operators use a CB radio to communicate with drivers and provide instructions as to where waste is to be discharged. After discharging loads, drivers return to the scale and are weighed to determine the net weight. A weight ticket is then printed by the scale house operator and signed by the vehicle driver and the scale operator.

An access road is located around the facility. The location of access roadways to the active disposal area vary depending upon the location of the active disposal area.

Please refer to Appendix H for a traffic pattern plan.

3.3 Waste Review, Unloading and Inspection Procedures

3.3.1 Waste Review

NCES implements measures to restrict acceptance of prohibited wastes at this facility. Loads identified as having prohibited wastes (as listed in Section 2.2) are to be rejected as described in Section 6.6.

All waste delivery vehicles stop at the scale prior to proceeding into the landfill. The scale operator identifies the customer and queries the customer's account in the facility's computer system or manually enters a customer's information. The driver of the vehicle identifies the type and origin of waste which is entered into the facility's computer system by the scale house operator prior to allowing the vehicle to proceed to the active working area. Only waste authorized for disposal at the facility and identified as such by the waste hauler is allowed to proceed beyond the scale location. The driver must sign a scale ticket for every load delivered which includes a certification statement:

"By signing above, I declare that I did NOT deposit any PROHIBITED WASTES."

Loads of C&D materials delivered to the site are to be visually inspected. Loads that are predominantly materials suitable for processing to produce alternative daily cover (ADC) (i.e., wood, cardboard, paper and other miscellaneous solid C&D debris), may be stockpiled within the active landfill. Loads of C&D materials that do not appear suitable for processing will be directed to the active face of the landfill. In the event unsuitable materials (i.e., excessive trash or metals) are found in stockpiled materials they are to be removed by hand sorting or using a front loader or excavator. Metals may be recycled; trash and other debris are to be hauled to the working face for disposal.

In addition, trucks delivering Non-Hazardous Special Waste are not allowed beyond the scale area unless written approval has been issued by NCES, please refer to section 3.3.2 for Special Waste Program for more detail.

The likelihood of unacceptable wastes being delivered to this facility will be minimized by:

1. Customer education;
2. Training landfill operations staff;
3. Signs posted at the facility; and
4. Inspections of incoming waste loads.
5. 24-hour video surveillance system

3.3.2 Special Waste Program

The facility has a comprehensive program for management and handling of Special Waste. This program is in addition to the procedures for unloading and inspection in Sections 3.3.5 and 3.3.6. Special Waste is defined as:

A non-hazardous waste, as defined by the New Hampshire Hazardous Waste Rules, which because of the process

generating the waste or its physical, chemical and/or biological characteristics potentially requires special testing and/or handling.

3.3.2.1 Special Waste Acceptance

The evaluation of Special Waste is conducted by an NCES technical representative(s) and includes the following.

- After the initial waste evaluation, the Special Waste Generator must complete an NCES Special Waste Characterization Profile Form, which characterizes the waste to be disposed and includes a certification statement declaring the waste is not hazardous.
- Requests for the approval of Special Waste are to be reviewed by the Special Waste technical staff to ensure that the wastes are non-hazardous and may be accepted under the facility permit. Waste streams are either approved by NCES, with or without special conditions for management of the material, or approval is denied.
- Odor generating potential will be assessed when Special Waste streams such as sludges are considered for disposal at the facility. NCES will impose as a condition of approval for special wastes (including wastewater treatment plant sludge) delivered to the facility that the generator shall provide odor control measures as necessary. NCES will also include as a condition of special waste approval that loads with unacceptable odors may be rejected at the discretion of landfill operating staff.
- In addition to evaluating new waste streams, the waste streams of existing customers are also to be reviewed periodically. This review may involve site visits, review of Material Safety Data Sheets (MSDS), waste stream analysis, load inspections, or the re-evaluation of special waste management decisions.

- The Special Waste Characterization Profile Form and approval documentation are maintained on file at the landfill. If the approval is conditional on tonnage or testing, the approval limitations are entered into the scale system at the scale house and tracked with each incoming load.
- Each Special Waste delivery will be required to have a waste tracking document (i.e., non-hazardous manifest or bill of lading) used to track the waste from the point of generation through transportation, to disposal. The waste tracking document contains the customer / generator information, a description of the waste, the transporter information, and the approved disposal facility (destination).
- A copy of the waste tracking document is attached to the scale ticket and maintained on file at the Facility.

3.3.2.2 Special Waste Handling

- Upon arrival at the facility, the driver will present the required waste tracking document to the scale attendant. The scale attendant will review the documentation and verify the waste approval number and all limitations (e.g. tonnage, handling requirements, etc.) have been satisfied. Once all the paperwork has been checked and verified, the scale operator will notify the Operations Manager or his designee that the Special Waste load is proceeding to the working face.
- The NCES staff will visually inspect the Special Waste for consistency with the description provided by the generator on the Special Waste Characterization Profile Form as the material is unloaded. This confirmation will include comparing the physical state of the waste with those characteristics as described in the Special Waste Characterization Profile Form and the waste tracking document.

NOTE: If a discrepancy is found during the visual

inspection, the Landfill Manager or his designee can reject the load. Procedures for rejecting a load are outlined in Section 6.6.

- After the visual inspection is performed and the load is verified, if applicable, NCES staff must sign the waste tracking document for the approved acceptable (if one-time event generated waste) load and return a copy of the signed document to the Transporter.
- The completed documentation will be filed at the facility office.

3.3.3 Customer Education

NCES staff will inform customers of the services provided at the Bethlehem landfill facility and to educate them as to what wastes are acceptable and unacceptable for disposal. All customers approved to bring acceptable solid waste to the NCES facility must follow standard Rules and Regulations for Facility Use. They are required to accept and sign a copy of the Rules and Regulations and to execute a Certificate of Acceptable Waste form (Appendix A).

NCES will provide updated information to new and existing customers on acceptable and prohibited wastes with any changes in the prohibited list in the regulations via mail, e-mail, or distributed at the scale house. NCES staff encourages customers to contact the facility with any questions they may have on acceptable wastes.

3.3.4 Facility Signs

A sign is posted at the entrance of the facility. Additional signs adjacent to the scales clearly identify acceptable and unacceptable wastes.

3.3.5 Waste Unloading & Routine Inspection

Once vehicles are in the disposal area, equipment operators visually inspect the waste as loads are tipped and compacted. As refuse is spread at the working face, operators continue to visually inspect for unacceptable materials. A routine facility inspection is performed once weekly and the form can be found in Appendix B.

3.3.6 Random Load Inspection

In addition to the routine visual inspection of the waste as it is discharged at the working face, at least 1 load per day is randomly chosen to be inspected more thoroughly. Consideration for random inspection is given based on the type of waste, accounts serviced, and whether the hauler has a record of disposing unauthorized wastes at the facility.

Random load inspections are performed by NCES personnel with NHDES Solid Waste Operator Certification training.

Random Load Inspection:

- A. An NCES representative will randomly select a hauler at the scale or the working face;
- B. The NCES Representative will notify the hauler of the random load inspection program that he/she has been selected for an inspection;
- C. If the hauler will not allow the inspection, they will not be permitted to unload at the site and may be banned from future use of the facility;
- D. If the hauler will allow the inspection the scale house will notify operators at the working face and the truck will be directed to the designated random load inspection area and met by NCES representative(s);

E. The load will be discharged in an area where it can be spread and visually inspected for unauthorized waste. The NCES representative shall not handle the waste. A Load Inspection Form will be completed;

F. Any unauthorized waste as identified in Section 2.2 of this document will be handled in accordance with Section 6.6 Receipt of Prohibited Waste and will be noted on the Load Inspection Form. The hauler will be given a copy of the inspection form if they request it. A copy of the Waste Inspection Form is included in Appendix A;

G. Photographs may be taken of the unauthorized waste, truck or its contents;

H. Unauthorized waste will be segregated and handled according to Section 6.6 of the Facility Operating Plan;

I. Any load identified as having a confirmable or suspected unauthorized waste will be documented on the Load Inspection Form. The hauler shall be sent a letter and may include photographs and an invoice for expenses associated with the management and proper disposal of any confirmed unauthorized waste. The hauler may be banned from future use of the facility;

J. Site personnel will file the report at the site where it will be available for NHDES review and will consist of:

- 1) The completed Load Inspection Form
- 2) Any photos
- 3) A copy of the scale ticket

K. Records are kept in accordance with procedures outlined in Section 8.0.

L. Personal Protective Equipment appropriate for Random Load Inspections will be provided by NCES.

Please refer to the contingency section (Section 6) for management of an unauthorized waste.

3.4 Method for Tracking Waste Quantities

As indicated in Section 3.2, haulers transporting waste to the facility are required to stop at the facility scale for weighing. After weighing, waste haulers proceed into the landfill for tipping. Waste haulers then return to the scale for re-weighing to determine the weight of the delivered waste. A scale ticket is generated and signed by the scale house operator and the driver of the vehicle.

Waste quantity tracking records are to be maintained at the facility until such time as approval to move or destroy the records is granted by NHDES.

3.5 Method of Tracking Outgoing Waste or Certified Waste-Derived Products

The facility is a disposal facility and should not generate solid waste requiring off-site disposal. Leachate is collected at the facility and transported off-site for disposal in accordance with the procedures outlined in Section 4.0. Any vehicle hauling leachate off-site is weighed prior to and after loading to determine the volume removed. Trucks hauling C&D debris which is segregated for off-site transport will be weighed before and after loading to track the quantity leaving the site.

3.6 Waste Storage Time and Capacity Limits

Authorized waste materials delivered to the facility will be disposed within the lined landfill. C&D debris suitable for processing to produce alternative daily cover ("ADC") occurs in accordance with

the procedures identified in Appendix F. The volume of C&D stockpiled on-site for processing is not to exceed 3,000 cubic yards. Processed C&D material may also be stockpiled within the active landfill and used by the facility as ADC. As indicated in Section 3.3, prohibited waste delivered to the facility may be stored temporarily on-site until such time as the hauler or qualified disposal company removes the waste.

3.7 Waste Management Following Receipt (Fill Sequence Plan)

An objective of the design and development of cells at NCES is to limit leachate generation by limiting the amount of precipitation that contacts waste.

A minimum of 4 feet of cover is to be provided over the anchor trench and the landfill liner system in other areas where temporary access roads are to be constructed. Swales may be constructed on slopes above the active fill area to divert stormwater runoff away from the landfill.

The filling of the landfill will be under the supervision of the landfill General Manager and in accordance with the fill sequencing Engineering drawings (Appendix H) provided with the pertinent permit application.

3.7.1 Initial Lift in Base Areas

An initial +/- 6-foot lift of select refuse (typically household trash) is to be placed above the liner system. Care is to be taken during initial refuse placement in these areas to remove items from the waste that could damage the liner system. During placement of the initial lift in the base areas, a full-time spotter is to observe the placement of refuse onto the base area of the landfill and remove items such as poles, pipes, and steel rods. Compaction of the initial lift in the base area will be performed with a bulldozer or similar equipment to avoid damage to the liner system.

3.7.2 Subsequent Lifts

Once the initial lift is placed, additional waste is spread and compacted in shallow layers generally about 2 feet thick with a landfill compactor. Following placement of the initial lift, fill placement is to proceed in daily cells built in successive compacted layers to a height typically between 6 and 15 feet depending upon the incoming refuse volume. Once filling proceeds above perimeter anchor trench grades, lifts will be graded to drain to the perimeter slopes to promote run-off to the perimeter swale. Grading of the top of each daily cell is to slope away from the active face to direct run-off away from the operating area. Sideslopes should be graded to establish 3H:1V slopes at the time of final closure. Slopes steeper than 3H:1V, but not steeper than 2.5H:1V, may be graded during operation to account for pre-closure settlement.

It is noted that actual day-to-day operations are left to the discretion of the Landfill Manager, and the fill sequencing and lift development outlined above may be adjusted based on actual operating conditions including waste volumes and weather conditions.

3.7.3 Landfill Cover

Daily cover consisting of soil or a NHDES approved Alternative Daily Cover (ADC) material is to be applied to the working face at the conclusion of each working day. Twelve inches of intermediate cover soil or NHDES approved alternative is to be applied in areas where active filling will not occur for a period of one month or more.

The purpose of the daily and intermediate cover is to limit odors from the site, limit the potential to attract vectors, promote drainage of surface water, limit windblown litter, reduce the potential for fire, provide stability, and to serve as subgrade for the capping system.

Soil cover material is to be applied and graded to direct runoff away from the filled area and limit leachate production. Silt fences and/or hay bales, or stone check dams are to be used as necessary to filter suspended soil particles within the runoff from areas which have received soil cover.

Synthetic Tarps may be utilized as ADC. When utilizing the tarps, soil or embedded chains shall be placed on the edges so the tarp resists wind lift. Additionally, an increased overlap of tarp over tarp may be utilized to improve coverage.

The facility may utilize a blend of processed C&D and soil at a 50/50 mixture rate (CWDP #6) as an alternate daily cover product. C&D debris that arrives at the site processed (chipped up by a chipper) or that is chipped on site is blended with soil at a ratio of 50/50 by volume.

ADC is often superior to soil covers as it reduces the use of natural resources. ADC must serve all the cover material functions identified above and may be used only after gaining approval from the NHDES.

Removal of temporary exposed geosynthetics cover and final caps can occur at the facility.

If more than 4 acres of exposed geomembrane is used, a qualified professional engineer must reevaluate stormwater management requirements

Cover material must be placed over all exposed waste no less frequently than at the end of each operating day.

Buckets with teeth shall not be used within 10 feet of an anchor trench or liner system.

4.0 RESIDUAL WASTE MANAGEMENT

4.1 Leachate Management Plan

The leachate collection system for the NCES facility consists of a double liner system with primary and secondary liquid collection. The collection, pumping and handling system is designed so that liquids are removed from the landfill daily.

4.1.1 Anticipated Leachate Generation Quantities

The quantity of leachate generated varies and is a function of weather conditions, (temperature and precipitation); the amount of waste in place, how long the cell has been open, whether the fill has progressed above grade so that runoff may occur, and the landfill cover condition.

Based on operating experience at the facility, the long-term average leachate generation during operation ranges from about 250 to 650 gallons per acre per day (g/a/d). Following construction of final cover, leachate generation rates gradually diminish with time.

4.1.2 Phasing and Cell Development

To limit leachate quantities, the NCES facility has been developed in phases.

4.1.3 Pumping/Removal Schedule

Leachate is automatically pumped from collection sumps through piping to two underground storage tanks using dedicated submersible pumps. Leachate consolidated in the underground storage tanks may be pumped to a reserve 150,000 gallon above ground storage tank. Leachate is pumped to a leachate loading facility where leachate tankers will be loaded.

Primary leachate levels are monitored with a supervisory control and data acquisition (SCADA) system. The pump controls are designed to activate the pumps when the leachate level is equivalent to the liner grade adjacent to the sump.

Liquids collected from the secondary systems of all stages will be pumped automatically, measured, and consolidated with primary leachate. Quantities pumped are measured to about 90% accuracy using flow meters.

A leachate loadout facility is located adjacent to the above ground storage tank.

Leachate management is conducted consistent with New Hampshire Solid Waste Rules Env-Sw 806.08.

Facility staff calculates the liquid infiltration rates into the secondary detection system. If it is determined that the calculated rolling 30 day average rate exceeds 25 gallons per contributory acre per day, it is to be reported to NHDES within one week of the rate identification except for flow which the NHDES agrees is the result of dewatering or a construction project. If the rate exceeds 100 gallons per contributory acre per day, NCES is to file an investigative report consistent with Env-Sw 806.09 unless the NHDES agrees the rate is the result of a dewatering activity or a construction related project.

Leachate which is pumped into tankers for off-site disposal will be disposed of at one or more of the permitted facilities listed below.

FACILITY
Concord, New Hampshire
Franklin, New Hampshire
Montpelier, Vermont
Essex Junction, Vermont
Burlington (North), Vermont
Barre, Vermont
Plattsburgh, New York

The SCADA system shall control the process of transferring liquids from the sumps to the underground storage tanks. The SCADA system is configured such that pumps will not be activated if the leachate underground storage tanks are full. Furthermore, an alarm will be activated if the underground storage tanks are full.

While the leachate sump to storage tank transfer system is designed to operate automatically, it may also be operated manually. Pumping leachate to a tanker truck at the leachate loadout facility is a manual operation.

4.1.4 Leachate Contingency Considerations

In the event of an extended power outage, NCES is to institute alternative power supply contingencies. A generator of adequate capacity is affixed to a trailer and available on site at any time for use as an alternative power supply. The generator is to be connected at transfer switches around the site, individually.

Should the contingency or other large storm occur, and the leachate exceeds the capacity available in the facility's leachate storage tanks, additional storage is available on the liner system. As discussed in Section 6.1, operations staff is to take steps to remove leachate to increase storage capacity when severe weather is predicted. NCES is to implement measures to remove the additional leachate from the site in an expeditious manner using additional tank trucks to haul the excess leachate to the treatment plants indicated in Section 4.1.3. Under no circumstances is temporary storage on the liner to last for more than seven days.

4.1.5 Record Keeping and Monitoring

The facility is to maintain records for each load of leachate shipped, identifying the quantity of leachate shipped, the date shipped, and the name of the wastewater treatment facility receiving the

leachate.

NCES is to sample the leachate consistent with the requirements of the NHDES Rules, the facility permit, and the requirements of the various disposal facilities.

4.2 Landfill Gas Condensate Management

Condensate generated between the landfill and the gas management system blower is collected and pumped into the leachate collection system.

4.3 Landfill Gas Management

The NCES Landfill includes an active gas collection & control system (GCCS) that extracts landfill gas (LFG) from the landfill and reduces emissions of methane and other air pollutants. LFG is primarily extracted using a combination of gas collection trenches and vertical gas extraction wells installed within the waste mass. The GCCS incorporates a renewable natural gas processing facility (RNG facility) owned by a separate entity and located on leased property on the west side of the landfill, which is designed to process untreated LFG into pipeline quality natural gas. The RNG facility is equipped with dedicated blowers, condensate handling systems, gas treatment technologies, and a trim flare rated for 60.1 million British thermal units per hour (MMBtu/hr). Under normal operating conditions, LFG will be drawn to the RNG facility by the RNG facility blowers. The trim flare will operate when needed to combust gas in excess of what can be processed into RNG and also during short periods of upset or maintenance. The gas that is processed into RNG will be compressed, containerized, and safely transported off-site to a utility or end user. In the event of a RNG facility shut down for prolonged periods of upset or maintenance, two multi-stage centrifugal gas blowers will be switched on to redirect extracted LFG to two self-supported open candlestick-style flares for destruction. Various systems are in place to record data and manage gas flow to the RNG facility and flares.

The LFG generation rate is projected to peak at approximately 3,300 standard-cubic-feet-per-minute (scfm) of LFG at 50% methane. The combustion capacity of the two open flares combined is 4,850 scfm at 50% methane. The combined capacity of the RNG facility and associated trim flare is 4,500 scfm at 50% methane.

The NCES landfill is permitted by:

- Title V Air Permit TV-0063 (Stages I through VI)

The RNG facility's air permit is separate from the landfill's air permit.

Please refer to Appendix C for landfill gas management.

5.0 FACILITY MAINTENANCE, INSPECTION, AND MONITORING PLAN

The areas in and around the vicinity of the landfill are to be maintained in a neat and orderly manner. The access roads are to be graded when necessary and maintained in a serviceable condition.

Closed portions of the facility will also be visually inspected. The purpose of inspecting the closed portions of the site is to evaluate the integrity of the final capping system, the stormwater management system, erosion control measures, and leachate collection systems.

5.1 Spontaneous Combustion and Other Fire Hazards

Fire protection controls on-site consist of cover soils, fire extinguishers and the site water truck. Gas management system records are to be periodically reviewed to observe that system monitoring is being performed and that the concentrations of the various gases within the landfill gas collection system are within expected ranges.

5.2 Vector Control

Compaction and the use of cover material limits vector access to the waste. If necessary, appropriate measures such as use of a professional exterminator would be employed.

5.3 Gas Monitoring and Control

An active landfill gas system has been constructed at the NCEC facility and will be expanded as necessary. The system consists of drilled gas extraction wells and lateral gas extraction trenches which are connected to gas collection piping under vacuum. Refer to Section 4.3 for additional information regarding the processing and destruction of the landfill gas.

A written plan for confined space entry is maintained on site.

Monitoring for landfill gas outside the limits of the landfill will involve sampling gas monitoring probes as described in the Gas Monitoring Plan in Appendix C. These probes are to be monitored for explosive gas, using a dual-range natural gas indicator such as a Gas Tech Model NP-204 or equivalent.

The following steps are to be implemented in the event that monitoring results indicate combustible gas concentrations in the soil exceed 50 percent of the lower explosive limit (LEL) at the property line or 25 percent of the LEL in on-site structures excluding leachate collection and gas recovery components (note that the LEL defined above corresponds to 5 percent methane by volume in air):

- Take all necessary steps to ensure protection of human health and notify NHDES [This notification shall be deemed to have taken place when the Department's Project Manager in the Solid Waste Compliance Section 603-271-2925 is notified]. Notification shall be made to the

Department verbally as soon as practicable with a written report submitted within 5 days of the incident or situation in compliance with Section Env-Sw 1005.09 of the Solid Waste Rules;

- Within seven (7) days of detection, place in the operating record the methane gas levels detected, and a description of the steps taken to protect human health; and
- Within sixty (60) days of detection, implement a remediation plan for the methane gas release, place a copy of the plan in the operating record, and notify the NHDES that the plan has been implemented. The plan shall describe the nature and extent of the problem and the proposed remedy.

Locations where gas concentrations exceed 50 percent of the LEL at the property line are to be identified in a separate report which is to be forwarded to NHDES.

Should the combustible gas concentrations be determined to exceed 50 percent of the LEL at any permanent probe location, an evaluation is to be made to determine whether the frequency of monitoring should be increased, and whether the monitoring network and type of monitoring should be modified to enhance detection. If continued monitoring indicates elevated levels of landfill gas at the property line, an appropriate plan to control gas concentrations, such as further expansion of the active gas system, is to be developed and submitted to NHDES for review.

If monitoring indicates that additional control measures are necessary, they are to be installed so that:

1. Gas concentrations at the property boundaries will be less than 50 percent of the LEL; and
2. Gas concentrations at any structure will be less than 25 percent of the LEL.

5.4 Odor Control

The application of daily cover, intermediate cover, the active gas

collection system, final landfill cover, temporary synthetic membranes and surface scans are the primary mechanisms that provide effective odor control.

Other measures to manage odors on a case by case basis are deployment of odor control pellets and a misting system applied in areas where odors are noted.

If waste streams are identified which routinely exhibit unacceptable odor, the generator will be informed and required to take measures to reduce odor. If this cannot be accomplished, the generator's waste stream will not be accepted at the facility.

Items to check during routine inspections include:

- The active gas collection system records to observe that gas is being extracted effectively from the various collection locations;
- That there is adequate daily or intermediate cover on the waste; and
- If necessary, odor neutralizing products or misting agents be deployed.

When the facility receives a contemporaneous report of an off-site odor it must implement an odor inspection to attempt to confirm the odors at the alleged source, if possible, identify the source of the odor and complete a form for each report. The form can be found in Appendix D. For odor reports that are not contemporaneous, the facility must complete those portions of the form that apply to all odor reports.

Facility personnel who are likely to receive such odor reports will be trained in proper completion of the form. For those persons who may be calling during hours when the facility is not open, the call is automatically forwarded to an answering service which will contact an NCES representative. The facility will maintain the original report forms at the facility and will promptly submit a copy of each such

form to NHDES.

5.5 Dust Control

Dust control procedures include proper maintenance of vegetated areas and gravel service roads. Dust is to be controlled on facility access roads by the application of water, synthetic liquid or other approved materials as necessary.

5.6 Windblown Litter Control

Blowing litter is to be minimized by limiting the active working face, applying daily cover to the active fill areas and fencing. Other methods, such as the utilization of litter pickers, portable fencing and permanent perimeter fencing, are employed. Any windblown litter must be collected promptly and taken to the active disposal area.

Litter will also be collected along the entrance area and roadways. Refuse hauling trucks are required to have their loads tarped or use closed containers/truck bodies which reduces windblown litter.

5.7 Leachate Management

The leachate systems are monitored through the SCADA system. The quantity of liquid pumped from the primary and secondary collection systems is recorded and provided to the NHDES. Leachate sideriser buildings and concrete access structures are equipped with leak detection features.

Leachate is removed from the sump area to keep head on the liner less than 12-inches during routine operations, including up to the 25-year, 24-hour storm events. During the 100-year, 24-hour storm event (5.7 inches of rain), head on the liner must be removed in 7 days. To accomplish this, 10 tanker trucks hauling continuously to Concord during operations (6AM to 6PM) over a 6 day period during worst case conditions, which would consist of minimal waste (6 feet or

less) in either Stage VI Phase I or II.

5.8 General Spill Management

NCES has a spill prevention and countermeasure control plan (SPCC Plan). Spills will be managed in accordance with this plan.

5.9 Stormwater Management Systems

The surface water management systems are inspected and managed in accordance with the site's Stormwater Pollution Prevention Plan (SWPPP).

Ditches and detention ponds, side slopes and surfaces of the exterior landfill berms are to be inspected for erosion. All side slopes should have well-established vegetation, low emission "temporary" capping material or be in the process to be permanently capped.

Any closed drainage system shall be inspected annually and cleaned if necessary. All stormwater management systems are inspected once annually in accordance with the Federal Multi Sector General permit. Ongoing maintenance is performed as necessary in accordance with Appendix B to ensure proper stormwater flow to control devices and at this site are predominantly large stormwater management ponds and culvert pipes. In addition to the annual Multi Sector General permit inspection, the site will monitor stormwater conveyance systems in the spring and in the fall, annually.

5.10 Groundwater Monitoring

Sampling and analyses of groundwater is performed in accordance with the current NHDES Groundwater Management and Release Detection Permit.

Permanent groundwater monitoring wells are installed to monitor groundwater quality at the site. The monitoring wells are typically

constructed using polyvinyl chloride (PVC) well screen and riser piping. The well screen for the monitoring wells is surrounded by a sand filter. A bentonite seal and cement/bentonite grout surround the riser pipe from the sand filter to the ground surface. Monitoring wells are provided with protective casings and locking caps.

5.11 Leachate Breakout Management

Inspections are to include observations of landfill side slopes for evidence of leachate breakouts. Breakouts are to be repaired promptly. Methods to repair breakouts may include excavation of the breakout and backfill with free draining material to promote drainage into the landfill. Leachate breakout locations are recorded on a field sketch and submitted with the monthly facility report. A copy of the repair log form and field sketch are provided in Appendix E.

5.12 Bird Control

NCES performs bird control by utilizing dispersal techniques such as propane cannons, audible distress calls, whistlers (bottle-rocket style) and inflatable predators. NCES also manages bird nuisance with a Federal Depredation Permit #MB037547-0. NCES will continue to look for and deploy new technologies.

5.13 Asbestos Records and Plan

The NH Solid Waste Rules require that the asbestos disposal locations be documented, which was done for Stage IV for past disposal of asbestos waste. Asbestos waste is not permitted at the NCES Landfill. These records are maintained at the site, and are included as Appendix H.

5.14 Snow and Ice Control

To the extent possible without endangering the safety of persons at

the site, NCES will control snow and ice on the facility's roads by plowing and the use of sand or other inert grit to increase traction. If such measures do not make use of the roads reasonably safe, NCES may use any other substance or combination of substances used by the N.H. Department of Transportation to treat roads in winter.

6.0 CONTINGENCY PLAN

Specific actions to be taken in the event of severe storm, fire, operator injury, spills and receipt of prohibited wastes are described in the following section. A list of emergency phone numbers is provided below. For police, fire and medical emergencies, 911 may be dialed.

List of Emergency Organizations		
Type of Service	Name of Organization	Telephone Number
Fire	Bethlehem Fire Department	(603) 869-5822 In Emergency: Dial 911
Poison Center	Northern New England Poison Center	1-800-222-1222
Hospital	Littleton Regional Hospital	(603) 444-9000
Spill Notification	NHDES (M-F, 8AM-4PM)	(603) 271-3899
Spill Notification	NH State Police (Nights – Weekends – Holidays)	(800) 346-4009 Out of State (603) 271-3636

6.1 Severe Storm

If severe weather is predicted including the potential for a large amount of precipitation or high winds, operating staff are to evaluate if the facility should be closed.

A preemptive closure may allow operating staff more time to cover

the refuse, secure equipment, and secure the facility.

6.2 Fire and Accumulation of LFG

FIRE - The Bethlehem Fire Department 1- (603) 869-5822 will be contacted in the event of a fire at the facility.

Loads of refuse which are suspected to be burning will not be disposed in the active disposal area. Instead, such loads will be dumped in the hot load area. If an incoming load of refuse is suspected of being on fire, the haul vehicle will be directed immediately to the hot load area. The hot load will be monitored, allowed to cool and possibly quenched with water (if necessary) prior to disposal in the active area.

Soil may also be used to smother fires in support of the Fire Department at the working face.

Appropriate fire extinguishers are carried on the facility's heavy equipment at all times and used to control small fires that may occur. Fire-fighting will not be done by employees at the risk of personal injury.

Accumulation of combustible gas - The following steps are to be implemented in the event that monitoring results indicate combustible gas concentrations in the soil exceed 50 percent of the lower explosive limit (LEL) at the property line or 25 percent of the LEL in on-site structures excluding leachate collection and gas recovery components (note that the LEL defined above corresponds to 5 percent methane by volume in air):

- Take all necessary steps to ensure protection of human health and notify NHDES. This notification shall be deemed to have taken place when the Department's Project Manager in the Solid Waste Compliance Section 603-271-2925 is notified. Notification shall be made to the

Department verbally as soon as practicable with a written report submitted within 5 days of the incident or situation in compliance with Section Env-Sw 1005.09 of the Solid Waste Rules;

- Within seven (7) days of detection, place in the operating record the methane gas levels detected, and a description of the steps taken to protect human health; and
- Within sixty (60) days of detection, implement a remediation plan for the methane gas release, place a copy of the plan in the operating record, and notify the NHDES that the plan has been implemented. The plan shall describe the nature and extent of the problem and the proposed remedy.

6.3 Injury

In the event of personal injury, first aid should be administered, and an assessment should be made as to whether emergency (ambulance) care is required.

6.4 Petroleum Spills

Please refer to the SPCC (Spill Prevention Control & Countermeasures Plan) and SWPPP (Stormwater Pollution and Prevention Plan) plans.

6.5 Leachate Spills

When a leachate release or spill occurs, a determination is to be made as to:

- the location of the release, or spill;
- Source of the leachate;
- An estimate of any quantity released;
- The direction in which any spill or release is heading; and/or
- The possibility of fire and/or explosion.

The following are general procedures that are to be followed in the event of a spill at the facility:

Control – The first task should be to stop the release of leachate, if possible, by such actions as shutting off pumps, placing soil against a

leak, or diverting flow to a collection point. If the release of leachate cannot be controlled, begin the second step (transfer) immediately.

If a spill occurs on the ground surface, use absorbents if the spill is relatively small. Otherwise, use dirt, sand, or other relatively impervious material to dam the spill and prevent flow. Plug any drains in the area of the spill as soon as possible after a spill has occurred.

If the spill has reached a body of water the entire body of water must be considered leachate until such time analytical testing establishes that impact has been remediated.

Transfer – Once a spill is contained, the spilled material must be transferred to appropriate storage containers before disposal. If a spill is small and absorbents are used, they may be manually placed in waste containers and transported to the landfill workface for disposal at the facility. Collected liquids are to be transported off-Site for disposal at an appropriate wastewater treatment facility or discharged back to the landfill.

Leachate should be pumped into an appropriate bulk tank truck or to a container or tank suitable for storage of the material. Handling of spilled material is not to be done at the risk of personal injury.

Disposal – The disposal alternatives are the landfill or a permitted wastewater treatment facility.

6.6 Receipt of Prohibited Waste

When a prohibited waste stream is discovered, the procedure outlined below is to be followed:

- Special Waste that has not been approved in accordance with Section 3.3.2.1 or other prohibited waste which is deposited on

the working face and which does not appear to NCES personnel to be an immediate threat to health or safety (e.g., whole tires, white goods, etc.) is to be isolated by the landfill equipment operator. The customer is to be identified, and requested to remove the waste. If the source of the waste or hauler cannot be identified, NCES will evaluate the situation and implement appropriate procedures for the management of the waste. NCES staff will notify the landfill manager and/or the company's Permits, Compliance and Engineering personnel immediately. The unauthorized waste will be separated and if appropriate, placed in a secure container. The unauthorized waste will be evaluated by trained personnel and characterized for proper disposal. If the waste is identified to be potentially hazardous, NCES staff will contact an authorized hazardous waste company as identified in Section 2.2. NCES would utilize one of the following companies (or similar qualified firms) for removal and disposal of unauthorized waste:

CYN Environmental
8 Progress Drive
Dover, NH 03820
1-603-749-4969

Clean Harbors Environmental Services, Inc.
20 Dunklee Road
Bow, NH
1-603-224-6626

- In the event a waste disposed on the working face is believed to present an immediate threat to health and safety (e.g., reactive chemicals, ruptured drums containing liquids), the waste is to be left in place undisturbed and NCES staff will immediately notify the landfill manager. The NHDES will also be notified. The waste is to be evaluated and characterized for proper handling and transportation. Such waste is to be weighed and promptly transferred using licensed waste transporters and transported to a licensed disposal facility.

- The following table describes management of specified prohibited wastes. This list is not intended to be all inclusive, but a general tabulation of typical materials. The “Disposal/Transfer” vendor information is intended for reference only and may be modified by the Facility.

MATERIAL	TEMPORARY STORAGE LOCATION	WASTE CONTAINER TYPE	MAXIMUM DURATION ON-SITE STORAGE	DISPOSAL / TRANSFER
Anti-Freeze	Maintenance Garage	Drum	< 1 year per Universal Waste	Recycler
Asbestos	Near Working Face – Secure location determined at the time of incident.	Covered Dumpster / Roll-off or Trailer	Removed upon testing and proper management arrangements.	Alternate Disposal Facility
Batteries (Wet Cell)	Maintenance Garage	Storage Rack or Plastic Bin	< 1 year per Universal Waste	Universal Waste Recycler
Batteries	Electronics Storage Shed	Drum	< 1 year per Universal Waste	Universal Waste Recycler
Cathode Ray Tubes (CRT's)	Electronics Storage Shed	Cardboard Box	< 1 year per Universal Waste	Universal Waste Recycler
CFC Containing Appliances	Designated Area	Roll-off or Concrete Slab	3-6 Months	Certified Technician removes CFCs. Recycler
Contained Gaseous (Propane Tanks)	Designated Area	Roll-off or Concrete Slab	3-6 Months	Littleton Town Transfer Station
Fluorescent Bulbs and Lighting Ballasts	Electronics Storage Shed	Labeled Cardboard Box	< 1 year per Universal Waste	Universal Waste Recycler
Medical Waste (Untreated)	Near Working Face – Secure location determined at the time of incident	Container it was shipped in / Dumpster / Roll-off	Removed upon testing and proper management arrangements.	Alternate Disposal Facility
Mercury Containing Devices	Electronics Storage Shed	Drum or Cardboard Box	< 1 year per Universal Waste	Universal Waste Recycler
Motor Oil	Maintenance Garage	Drum	Removed upon testing and proper management arrangements.	Licensed Hazardous Waste Contractor
Tires - whole	Designated Area	Roll-off or Concrete Slab	3-6 Months	Recycler or Alternate
Unidentified Waste that may be Hazardous	Where off-loaded, until identified. Secured storage per NHDES Solid and Hazardous Waste Division(s).	Container as recommended by DES and Contractor. Substance Dependent*	Removed upon testing and proper management arrangements.	Licensed Hazardous Waste Contractor
White Goods	Designated Area	Roll-off or Concrete Slab	3-6 Months	Recycler

6.7 Spare Pumps and Related Mechanicals

Back up pumping & controls equipment is inventoried and available on site in the event that the primary device fails to operate appropriately. Each pump station has a back-up pump and flow monitoring device. The facility also has a back-up blower in the event that one of the two existing blowers has mechanical issues. Most pump and control devices can also be ordered and available within 24 hours.

6.8 Back Up Power Plan

Back up power is available at the site for multiple purposes. Back up power includes;

- A stationary propane generator for full back up power to the landfill gas collection and control area,
- A stationary diesel generator or full back up power to maintain the entrance at the facility (scale, scale house, offices & shop),
- A mobile generator mounted to a trailer that can be taken to each sideriser building to pump the sumps and utilized for the leachate load out system.

6.9 Emergency Leachate Removal

Leachate removal may occur outside of the normal operating hours of 6 a.m. to 6 p.m. for emergency or extenuating circumstances primarily attributed to higher-than-normal leachate generation occurrences which may include:

- Spring snow melt
- Abnormal rain events or weather patterns
- Early operations of a new cell

Extenuating circumstances that may require leachate removal operations outside of normal operating hours could include holidays, availability of haulers, availability of disposal facilities, or

inclement weather creating unsafe transportation conditions.

These leachate removal events are emergencies under the NHDES Rules (Env-Sw 1105.08)(b) as they can affect the successful operation of the facility if leachate cannot be removed from the site due to the conditions described above.

If leachate removal is required outside of this time frame for emergency or other extenuating circumstances, NCES will notify NHDES-WMD.

7.0 EMPLOYEE TRAINING PROGRAM

NCES's operations supervisor must be an NHDES-certified principal operator under Env-Sw 1600.

NCES provides training to staff on job responsibilities, human resource matters, operations/equipment, health and safety, and environmental compliance. Training is primarily done by qualified internal staff, however third party consultants may be used. Necessary job-related training is provided to new-hire employees. Training related to landfill operations staff includes:

1. Health and Safety

Training on a variety of health and safety related topics is provided primarily by on-site management. Generally training occurs once per month and ranges from ½ hour to 1 hour sessions depending on the topic.

2. Specific Technical Training on Operating Equipment and Procedures

The landfill manager will ensure employees are technically trained in proper equipment use prior to operation. On-site and off-site training is provided for staff and management on specific

equipment from suppliers.

3. Facility Operating Plan

The Facility Operating Plan is reviewed annually by the landfill manager and/or Compliance Staff. Facility operations staff is trained annually on the Facility Operating Plan or more frequently if changes are made subsequent to the most prior training.

Within thirty days of NHDES approval of any changes to the Facility Operating Plan, each employee will receive training with respect to any change related to the employee's responsibilities. Each training session will require attendees to sign a log specifying the sections of the Facility Operating Plan on which the operator received training. Employee familiarity with the Facility Operating Plan is monitored through interaction with the instructor during training.

a. Identification of Acceptable and Unacceptable Waste

Annual training is provided to equipment/compactor operators in identification of acceptable and unacceptable waste (Hazardous waste, CFC's, asbestos, etc.). Training topics may include: definitions, what is unacceptable, identification practices, load inspection, handling procedures, and procedures for unapproved or unacceptable deliveries and contact information.

b. Special Waste Training

Annual training is provided to the landfill manager, sales representative, and equipment/compactor operators, involved in the management of Special Wastes, as applicable

to their related duties. Additional training may be required when there are new handling requirements, new rules or policies, or new waste streams. Training topics may include: definitions, examples of Special Wastes, identification of Special Waste, Special Waste approval process, load inspection, handling procedures, and procedures for unapproved or unacceptable deliveries and contact information.

c. Emergency and Contingency Plan Procedures

The emergency and contingency plan procedures are reviewed annually by the landfill manager. Facility operations staff are trained regularly and as necessary on various components of the Plan.

d. Odor Identification

Facility personnel who receive and respond to odor complaints shall be trained in detecting odors, identifying potential sources of odors, and documenting the odor complaint and NCES' response actions. Such training shall be provided by a qualified third-party and renewed annually.

4. Spill Prevention Control and Countermeasures (SPCC)

The facility is required to have a SPCC Plan under 40 CFR 112. Annual training is held for employees on the SPCC Plan and emergency response procedures. In addition, the training includes a review of the NHDES criteria for reporting petroleum discharges and emergency contact information.

5. Storm Water Pollution Prevention Plan (SWPPP)

The Facility is required to have a SWPPP by the US EPA National Pollution Discharge Elimination System (NPDES) Program s torm water

pollution prevention training is conducted for operational employees annually.

8.0 RECORD KEEPING AND REPORTING

The following records are to be maintained at the facility as well as the NCES's Permitting and Compliance office:

- Copies of facility permits and approvals;
- Quantity, type, and origin of all waste received by the facility;
- Quantity and destination of leachate generated by the facility;
- Quantity, type and destination of all certified waste-derived products used or produced by the facility, if any;
- Record of inspections, maintenance, and repairs;
- Record of accidents, violations, remedial and emergency event response actions;
- Record of complaints received and related response actions;
- Data from all environmental monitoring performed at or for the facility, whether required by the Solid Waste Rules or the permit or undertaken voluntarily;
- Documentation of contact with the waste management district(s) served by the facility as required by Env-Sw 1105.06 (11);
- The facility design reports;
- Hydrogeologic reports;
- Special Waste profile documentation and analysis, as applicable, for all Special Waste delivered to the site;
- Other record keeping information and documentation required by the Solid Waste Rules; and
- Other information and documentation as required by the terms and conditions of the facility permits and approvals.

The operating records identified above are to be maintained at the facility at all times during the active life of the facility, unless approval is granted to relocate or destroy the records pursuant to a Type V permit modification or a waiver. Operating records are to be made available for NHDES inspection and copies provided to the department pursuant to Env-Sw 2000. Following closure of the facility, the operating records are to be maintained at a location approved by NHDES in the Closure Plan, unless destruction of the records is approved pursuant to a Type V permit

modification.

NCES will notify the department in writing within thirty (30) calendar days of any change in the facility address, telephone number, key operators or contact person(s).

Annual Facility Report

An annual facility report is to be filed by March 31 each year for the prior calendar year and include the information required by Env-Sw- 1105.13.

Quarterly Operations Report

Operations reports shall be submitted quarterly pursuant to Env-Sw 806.08(g):

1. A summary of all complaints received during the quarter, including:
 - a. NCES' investigation and response actions;
 - b. An analysis of the most likely causes of the complaints;
 - c. An analysis of the effectiveness of measures taken to address the complaints and abate the conditions that likely caused the complaints;
 - d. An analysis of additional practicable measures warranted to prevent the reoccurrence of conditions that likely caused the complaints, and, if such measures are identified, the date by which the permittee shall implement the additional measures; and
2. A trend analysis of leachate flows, presented numerically and graphically, for each leachate flow monitoring point.

Annual Odor Control Evaluation

By August 31, 2021 and by August 31 each year operations take place thereafter, the permittee shall submit an annual odor control evaluation report for July 1 through June 30 (preceding), prepared and signed and stamped by a third-party qualified professional, which provides a comprehensive assessment of all odor control measures employed at the facility during the reporting period based on a comprehensive cause and effect evaluation of all odor incidents, response measures, and corrective actions, and includes no less than the following content:

1. Facility Description, including a description of the landfill gas collection and control system, and facility changes since the previous reporting year;
2. Odor Control Evaluation, consisting of a review and evaluation of odor control practices and measures employed by the facility during the reporting period, including a comparison of those practices with industry standard and best practices; a review of odor control methods used at the facility specifically including but not limited to control measures employed for areas used to stage trucks waiting to off-load, the working face, locations under construction, and locations without final cap; and an assessment of the effectiveness of odor control measures based on an evaluation of records compiled for odor events including, construction related odors, landfill gas odors, leachate odors, and control methods used;
3. Landfill Gas Collection System Analysis, including system design and development (i.e., phased installation, system and well field coverage, system design), and landfill gas collection, recovery and efficiency;
4. Odor Complaint Analysis, including geographical trends, weather-related trends, temporal trends (e.g., time-of-day, seasonal), waste composition trends, working face location trends, landfill cover trends, landfill gas system function trends, and a summary;
5. Conclusions and Recommendations, including such relative to daily and routine operations, landfill gas system operations, leachate management practices, construction practices, and odor complaint reporting and response procedures;
6. Implementation plan, including dates by which the permittee has already or shall timely implement the recommendations and a status update regarding the implementation of recommendations in prior odor control evaluation reports; and
7. Figures, Tables and Attachments, including a site locus map, a gas extraction well location plan, a figure showing odor complaints by location, figures showing graphical trends of landfill gas and waste composition data relative to odor complaints and weather, tables summarizing final cover installation and daily cover use as well as

annual odor complaints and surface emissions monitoring results, and logs of odor complaints and waste loads rejected due to odors.

Appendix A

*Rules and Regulation for Facility Use & Certificates of
Acceptable Waste Form*

Appendix B

Facility Inspection Checklist

Appendix C

*Operations and Maintenance Manual, Gas Management
System (April 2022)*

Appendix D

Odor Complaint Form

Appendix E

Leachate Breakout Repair Logs and Field Sketch

Appendix F

*Operating Procedures for Segregating and On-Site Stockpiling
and Processing of Construction and Demolition Debris (C&D)*

Appendix G

Asbestos Disposal Location Plan

Appendix H

Traffic Pattern & Waste Placement & Sequencing Plans